

STRUCTURAL NOTES:

I. DESIGN CRITERIA:

1. DESIGN CONFORMS TO THE CALIFORNIA BUILDING CODE (CBC), 2016 EDITION, AND AMENDMENTS BY THE LOCAL JURISDICTION.

2. DEAD LOADS: BASED ON WEIGHTS OF EXISTING AND NEW MATERIALS OF CONSTRUCTION.

3. LIVE LOADS:

RECREATIONAL USE (TENNIS COURT)=75 PSF

YARDS AND TERRACES, PEDESTRIAN=100 PSF

4. SEISMIC (ASCE 7-10):

$V = 1.00$

W (LRFD)

SEISMIC DESIGN CATEGORY = D

IMPORTANCE FACTOR (I) = 1.0

REDUNDANCY FACTOR RHO (ρ) = 1.0

SITE CLASS = C

LAT., LONG. (37.85, -122.48)

MAPPED VALUES

$S_s = 1.5$

$S_1 = 0.634$

$SD_s = 1.00$

$SD_1 = 0.548$

II. STRUCTURAL DRAWINGS:

1. NOTES, TYPICAL DETAILS AND SCHEDULES APPLY TO ALL STRUCTURAL WORK UNLESS NOTED OTHERWISE. FOR CONDITIONS NOT SPECIFICALLY SHOWN PROVIDE DETAILS OF A SIMILAR NATURE. VERIFY APPLICABILITY WITH THE ENGINEER IF NEEDED.

2. REVIEW ALL EXISTING FEATURES AND CONDITIONS UPON WHICH THESE DRAWINGS RELY.

3. COMPARE STRUCTURAL DRAWINGS WITH THE VARIOUS OTHER DRAWINGS AND SPECIFICATIONS BEFORE COMMENCING THE WORK. NOTIFY THE ENGINEER OF ANY DISCREPANCIES AND DO NOT PROCEED WITH AFFECTED WORK UNTIL THEY ARE RESOLVED.

4. DO NOT SCALE DRAWINGS TO OBTAIN DIMENSIONAL INFORMATION.

5. SEE ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS AND SPECIFICATIONS FOR INSERTS, SLEEVES, BLOCKOUTS AND OTHER CONDITIONS.

6. SEE ARCHITECTURAL DRAWINGS FOR ALL WATERPROOFING AND DAMPROOFING DETAILS.

III. CONSTRUCTION:

1. ALL WORK SHALL CONFORM TO CALIFORNIA BUILDING CODE, 2016 EDITION.

2. THE CONTRACTOR IS SOLELY RESPONSIBLE FOR THE PROTECTION OF LIFE AND PROPERTY DURING CONSTRUCTION OF THIS BUILDING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DESIGN AND CONSTRUCTION OF ANY SHORING, BRACING AND SCAFFOLDING REQUIRED TO COMPLETE THIS WORK. THE CONTRACTOR SHALL PROVIDE ADEQUATE SHORING, BRACING, AND SCAFFOLDING IN ACCORDANCE WITH ALL NATIONAL, STATE AND LOCAL SAFETY ORDINANCES. SHORING AND BRACING SHALL REMAIN IN PLACE UNTIL FLOORS, ROOFS, WALLS, AND SHEATHING THAT AFFECT THE SHORED PORTION OF THE WORK HAVE BEEN ENTIRELY CONSTRUCTED. THE ENGINEER'S PRESENCE OR REVIEW OF THE WORK DOES NOT INCLUDE THE ADEQUACY OF THE CONTRACTOR'S METHODS OR MEASURES.

3. THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT DAMAGE AND MINIMIZE MOVEMENT/SETTLEMENT OF EXISTING OR NEW CONSTRUCTION INSIDE OR OUTSIDE OF THE PROJECT LIMITS. THE CONTRACTOR SHALL PROVIDE AND BE RESPONSIBLE FOR ALL SHORING, BRACING, AND SOIL RETENTION SYSTEMS NEEDED TO BRING THE PROJECT TO ITS PERMANENT (AS DESIGNED) CONDITION.

4. THE CONTRACTOR'S TEMPORARY MEASURES SHALL BE ARRANGED OR DESIGNED SO AS TO NOT ALTER OR AFFECT THE PERMANENT STRUCTURE.

5. THE IMPOSED CONSTRUCTION LOADS SHALL NOT BE MORE THAN DESIGN LIVE LOADS.

6. WORK SHALL INCLUDE REPAIR AND/OR REPLACEMENT OF DEFECTIVE ITEMS.

7. OPENINGS IN FLOORS, SHEAR WALLS, BEAMS, OR JOISTS LARGER THAN THOSE SHOWN ON TYPICAL DETAILS OR STRUCTURAL DRAWINGS SHALL BE REVIEWED BY STRUCTURAL ENGINEER BEFORE PROCEEDING WITH THE WORK.

IV. EXISTING CONDITIONS:

1. INFORMATION REGARDING EXISTING CONDITIONS IS PRESENTED FOR REFERENCE ONLY. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS BEFORE STARTING WORK AND NOTIFY THE ARCHITECT AND ENGINEER OF ANY DISCREPANCIES BEFORE PROCEEDING WITH WORK.

2. THE REMOVAL CUTTING, DRILLING, ETC. OF EXISTING WORK SHALL BE PERFORMED WITH GREAT CARE AND SMALL TOOLS IN ORDER NOT TO JEOPARDIZE THE STRUCTURAL INTEGRITY OF THE BUILDING. IF STRUCTURAL MEMBERS NOT INDICATED FOR REMOVAL INTERFERE WITH THE NEW WORK, THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY AND PRIOR APPROVAL OBTAINED BEFORE PROCEEDING WITH THE WORK.

V. EXCAVATION, UNDERPINNING AND SHORING:

1. THE CONTRACTOR SHALL PROVIDE ALL MEASURES AND PRECAUTIONS NECESSARY TO PREVENT DAMAGE AND MINIMIZE SETTLEMENT OF EXISTING OR NEW CONSTRUCTION INSIDE OR OUTSIDE OF THE PROJECT LIMITS. ANY DAMAGE TO NEW OR EXISTING CONSTRUCTION INSIDE OR OUTSIDE OF THE PROJECT LIMITS CAUSED BY CONSTRUCTION TECHNIQUES OR MOVEMENTS OF THE SOIL RETENTION SYSTEMS IS THE RESPONSIBILITY OF THE CONTRACTOR.

2. DESIGN AND CONSTRUCTION OF TEMPORARY AND/OR PERMANENT UNDERPINNING, SHORING AND BULK HEADING FOR EARTH RETENTION DURING EXCAVATION SHALL BE BY AN EXPERIENCED SUBCONTRACTOR WHO SPECIALIZES IN THIS TYPE OF WORK.

3. SHORING, UNDERPINNING, AND EARTH RETENTION CALCULATIONS AND DRAWINGS, IF REQUIRED, SHALL BE PREPARED AND SUBMITTED TO THE SOILS ENGINEER AND STRUCTURAL ENGINEER FOR REVIEW PRIOR TO CONSTRUCTION. CALCULATIONS AND DRAWINGS SHALL BE PREPARED UNDER THE SUPERVISION OF, AND SIGNED AND STAMPED BY A CIVIL ENGINEER LICENSED IN THE STATE OF CALIFORNIA.

4. THE CONTRACTOR SHALL COORDINATE ALL ELEMENTS OF THE SOIL RETENTION SYSTEMS WITH ALL ELEMENTS OF THE PERMANENT BUILDING.

5. THE EXCAVATION SEQUENCES SHALL BE CONTROLLED TO MATCH THE REQUIREMENTS OF THE DESIGN OF THE SOIL RETENTION SYSTEM AND TO PERMIT MONITORING OF WALL AND GROUND MOVEMENTS.

6. PRIOR TO ANY EXCAVATION OR INSTALLATION OF ELEMENTS OF THE SOIL RETENTION SYSTEM, THE CONTRACTOR SHALL ESTABLISH BENCH MARKS AROUND THE PERIMETER OF THE AREA TO BE EXCAVATED. THESE MARKS SHALL BE SURVEYED FOR VERTICAL AND HORIZONTAL MOVEMENT AT WEEKLY INTERVALS DURING ACTUAL EXCAVATION AND CONTINUING DURING EACH SUBSEQUENT PHASE OF THE WORK AND SUBMITTED TO THE ENGINEER FOR INFORMATION. SEE THE SOILS REPORT FOR SPECIFIC RECOMMENDATIONS.

7. THE CONTRACTOR SHALL PROVIDE POSITIVE PROTECTION (MAT/SHEET COVERINGS) FOR ALL EXCAVATION SLOPES TO PROTECT SLOPES FROM INSTABILITY AND DETERIORATION DUE TO RAIN OR WIND.

8. THE OWNER'S SOIL TESTING LABORATORY SHALL REVIEW AND MONITOR THE EXCAVATION, DEWATERING AND SOIL RETENTION SYSTEMS. THE CONTRACTOR SHALL PROVIDE, INSTALL AND SURVEY:

A. VERTICAL AND HORIZONTAL MOVEMENTS OF THE TOP OF THE SOIL RETENTION SYSTEM.

B. BENCH MARKS ADJACENT TO AND AWAY FROM THE SITE PERIMETER FOR VERTICAL AND HORIZONTAL MOVEMENTS.

C. OBSERVATION WELLS FOR MONITORING WATER LEVELS BELOW GROUND SURFACE.

VI. FOUNDATIONS / SITE PREPARATION:

1. FOUNDATION DESIGN IS BASED ON CHAPTER 18, CBC. THE GEOTECHNICAL INVESTIGATION REPORT ENTITLED "GEOTECHNICAL INVESTIGATION TENNIS COURT RENOVATION", DATED 11/09/2011, BY ROLLO & RIDLEY GEOTECHNICAL ENGINEERS & SCIENTISTS CONTINUOUS FOOTINGS:

$\text{MAXIMUM SOIL PRESSURE} = 4,000 \text{ PSF DL} + \text{LL}$

$= 5,333 \text{ PSF DL} + \text{LL} + \text{SEISMIC/WIND}$

2. ALL SITE GRADING, FILLS AND SOIL PREPARATION SHALL CONFORM TO THE SOIL REPORT AND ALL WORK SHALL BE DONE UNDER THE SUPERVISION OF THE OWNER'S SOIL TESTING LABORATORY OR THE SOILS ENGINEER.

3. FOOTINGS SHALL EXTEND TO SUCH DEPTH AS TO BEAR ON FIRM, UNDISTRIBUTED SOIL. FOOTING DEPTHS SHOWN ON THE DRAWINGS ARE MINIMUM DEPTHS. FOOTINGS MAY BE POURED IN NEAT EXCAVATED TRENCHES, PROVIDED PRECAUTIONS ARE TAKEN TO INSURE NO CAVING OR SLUFFING OCCURS WHICH WILL RESULT IN UNSUITABLE BASE CONDITIONS OR INCLUSION OF SOIL MATERIAL IN THE CONCRETE WORK.

4. MATERIALS FOR SUB-CAPILLARY BREAK UNDER CONCRETE SLABS ON GRADE SHALL BE FREE-DRAINING GRAVEL OR CRUSHED ROCK. NOT MORE THAN 25% OF ROCK MAY PASS A $\frac{1}{2}$ " SIEVE AND NOT MORE THAN 6% MAY PASS A $\frac{3}{8}$ " SIEVE. ROCK COURSE SHALL BE ROLLED TO A SMOOTH SURFACE. A 2" MINIMUM LAYER OF CLEAN, IMPORTED AND SAND SHALL BE PLACED OVER THE SUB-SLAB VAPOR BARRIER OR MEMBRANE. MOISTEN SAND JUST PRIOR TO POURING CONCRETE SLAB.

5. BEFORE BACKFILLING BEHIND CONCRETE WALLS (BASEMENT WALLS, RETAINING WALLS, ETC.) CONCRETE SHALL HAVE ATTAINED FULL DESIGN STRENGTH AND ALL SUPPORTS (FLOORS, SLABS, BEAMS, ETC.) WHICH ARE REQUIRED FOR THE STABILITY OF THE WALL SHALL HAVE BEEN COMPLETED.

6. FOOTING EXCAVATIONS SHALL BE CLEANED OF LOOSE SOILS. NO FOUNDATIONS SHALL BE POURED INTO OR AGAINST SUB-GRADE CONTAINING FREE WATER. DEWATERING, IF REQUIRED, MUST BE CAREFULLY AND PROPERLY DONE TO AVOID DISTURBING THE FOUNDATION SOILS. OVER-EXCAVATED AREA FOUNDATIONS MUST BE BACKFILLED WITH CONCRETE.

7. A GEOTECHNICAL ENGINEER SHALL BE RETAINED TO PROVIDE OBSERVATION AND TESTING SERVICES DURING THE GRADING AND FOUNDATION PHASE OF CONSTRUCTION PER GEOTECHNICAL REPORT RECOMMENDATIONS. INSPECTION AND TESTING REPORTS SHALL BE SUBMITTED TO THE BUILDING DEPARTMENT.

VII. CONCRETE WORK:

1. CONTRACTOR SHALL SUBMIT FOR REVIEW BY THE ARCHITECT THE CONTRACTOR'S PROPOSED CONCRETE MIXES, DESIGNED BY THE CONCRETE SUPPLIER AND REVIEWED BY THE OWNER'S TESTING AGENCY. (INCLUDE INFORMATION TO SHOW CONFORMANCE WITH MATERIAL, STRENGTH, AND PROPORTIONING REQUIREMENTS OF THE CONTRACT DOCUMENTS.)

2. CONTRACTOR SHALL INFORM THE ENGINEER AT LEAST 2 DAYS PRIOR TO POURING ANY STRUCTURAL CONCRETE FOR THE OPPORTUNITY TO REVIEW THE WORK PRIOR TO PLACEMENT.

3. PROVIDE CONCRETE IN CONFORMANCE WITH THE FOLLOWING SPECIFICATIONS:

TYPE	COMPRESSIVE ^A STRENGTH	SLUMP ^B	W/C ^C RATIO	UNIT WT.
STRUCTURAL SLAB	3,000 PSI L.S. ^D	3½"	0.45	150 PCF
FOOTINGS, PIERS, GRADE BEAMS & WALLS	3,000 PSI	3½"	0.50	150 PCF
SLAB ON GRADE	2,500 PSI L.S. ^D	3½"	0.45	150 PCF

- A. ASTM C94 MINIMUM 28 DAY ULTIMATE COMPRESSIVE STRENGTH.

B. MINIMUM CONSISTENT SLUMP WITH PROPER PLACING.

C. WATER TO CEMENT RATIO.

D. L.S. = LOW SHRINKAGE MIX, SEE SECTION 7.

4. PROPORTION CONCRETE WITH A MINIMUM OF 20% AND A MAXIMUM OF 30% FLY ASH OR 50% SLAG REPLACEMENT.

5. USE WATER THAT IS CLEAN AND FREE FROM INJURIOUS AMOUNTS OF OILS, ACIDS, ALKALIS, SALTS, ORGANIC MATERIALS, OR OTHER SUBSTANCES DELETERIOUS TO CONCRETE OR REINFORCEMENT. NO CALCIUM CHLORIDE SHALL BE USED IN ANY CONCRETE.

6. USE 1"x#4 MAXIMUM AGGREGATE WHEREVER CLEARANCES PERMIT. USE $\frac{3}{8}$ " MAXIMUM AGGREGATE ONLY WHERE NECESSARY FOR PROPER PLACING, SUCH AS IN THIN SECTIONS, ETC.

7. ALL CONCRETE USED IN SUSPENDED SLAB AND SLABS ON GRADE SHALL BE DESIGNED FOR LOW SHRINKAGE (L.S.). ACCEPTABLE COURSE AGGREGATES FOR LOW SHRINKAGE CONCRETE INCLUDE KAISER CLAYTON, GRANITE ROCK, LESTONE, SECHLT, OR ORCAS AGGREGATES. FINE AGGREGATES ACCEPTABLE FOR LOW SHRINKAGE CONCRETE INCLUDE SECHLT OR ORCAS SANDS. ALTERNATE AGREGATES MAY BE SUBMITTED PROVIDED THEY PROVIDE A CONCRETE MIX WITH SHRINKAGE LIMITATION OF 0.040% AFTER 28 DAYS OF DYING. SUBMIT TEST TO ARCHITECT AND ENGINEER FOR REVIEW.

8. WHERE NOT SHOWN ON STRUCTURAL DRAWINGS. REFER TO ARCHITECTURAL DRAWINGS FOR DIMENSIONS AND LOCATIONS OF SLAB AND WALL OPENINGS, SLAB EDGE LOCATIONS, INTERIOR CONCRETE WALLS AND CURBS, TOP OF FLOOR SLAB ELEVATIONS, SLAB DEPRESSIONS REQUIRED TO ACCOMMODATE FLOOR FINISH DETAILS, AND CONCRETE STAIRS.

9. PIPES, SLEEVES, AND OTHER EMBEDDED ITEMS OTHER THAN ELECTRICAL CONDUIT LESS THAT 1" DIAMETER MAXIMUM SHALL NOT BE EMBEDDED IN STRUCTURAL CONCRETE OR INTERRUPT REINFORCING BARS UNLESS APPROVED BY ENGINEER OF RECORD.

10. ALL REINFORCING EMBEDMENTS, INSERTS, ETC. SHALL BE POSITIVELY SECURED IN PROPER LOCATION BEFORE CONCRETE IS PLACED. PROVIDE SUFFICIENT SUPPORT TO PREVENT DISPLACEMENT DURING PLACING AND FINISHING OPERATIONS.

11. ALL CONCRETE EXCEPT SLABS ON GRADE 6" THICK OR LESS SHALL BE MECHANICALLY VIBRATED SO AS TO COMPLETELY FILL THE FORMS WITHOUT CAUSING UNDUE SEGREGATION.

12. HORIZONTAL CONSTRUCTION JOINTS SHALL BE LOCATED AS SHOWN ON THE DRAWINGS, AND THE HARDENED CONCRETE SURFACES SHALL BE CLEANED BY SAND-BLASTING OR OTHER APPROVED MEANS TO EXPOSE FIRMLY EMBEDDED AGGREGATES PRIOR TO POURING ADDITIONAL CONCRETE IN CONTACT WITH THESE SURFACES.

13. VERTICAL CONSTRUCTION JOINTS SHALL BE FORMED AND KEYED AND NOT OVER 60 FEET APART. VERTICAL CONSTRUCTION JOINTS THROUGH BEAMS OR SLABS SHALL BE LOCATED BETWEEN THE $\frac{1}{4}$ AND $\frac{1}{2}$ POINTS OF THE SPAN. THE CONTRACTOR SHALL SUBMIT DETAILED DRAWINGS SHOWING THE LOCATIONS OF ALL CONSTRUCTION JOINTS AND CONTROL JOINTS.

14. FORMS SHALL BE PROPERLY CONSTRUCTED CONFORMING TO CONCRETE SURFACES AS SHOWN ON THE DRAWINGS, SUFFICIENTLY TIGHT TO PREVENT LEAKAGE, SUFFICIENTLY STRONG AND BRACED TO MAINTAIN THEIR SHAPE AND ALIGNMENT UNTIL NO LONGER NEEDED TO SUPPORT THE CONCRETE. FORMS AND SHORING SHALL NOT BE REMOVED UNTIL THE CONCRETE HAS ATTAINED SUFFICIENT STRENGTH TO WITHSTAND ALL LOADS TO BE IMPOSED WITHOUT EXCESSIVE STRESS, CREEP, OR DEFLECTION.

15. GENERAL CONTRACTOR TO COORDINATE SIZE AND LOCATION OF EQUIPMENT PADS WITH MECHANICAL CONTRACTOR.

INDEX OF DRAWINGS:

S-000 - GENERAL NOTES I
S-001 - GENERAL NOTES II
S-300 - CONCRETE DETAILS
S-310 - FOUNDATION DETAILS I
S-311 - FOUNDATION DETAILS II

SPECIAL INSPECTION AND STRUCTURAL OBSERVATION :

EMPLOYMENT OF SPECIAL INSPECTION IS THE DIRECT RESPONSIBILITY OF THE OWNER. SPECIAL INSPECTOR SHALL BE ONE OF THOSE AS DESCRIBED IN SECTION 1701.2. STRUCTURAL OBSERVATION SHALL BE PERFORMED AS PROVIDED BY SECTION 1710. A PRECONSTRUCTION CONFERENCE IS RECOMMENDED FOR OWNER/BUILDER OR DESIGNER/BUILDER PROJECTS, COMPLEX AND HIGHRISE PROJECTS, AND FOR PROJECTS UTILIZING NEW PROCESSES OR MATERIALS. IN ACCORDANCE WITH SECTIONS 1701; 1703; AND 1704 (2016 CBC). SPECIAL INSPECTION AND/OR TESTING IS REQUIRED FOR THE FOLLOWING WORK:

1. ☒ CONCRETE PLACEMENT SAMPLING

2. ☒ BOLTS INSTALLED IN CONCRETE

3. ☐ SPECIAL MOMENT - RESISTING CONCRETE FRAME

4. ☒ REINFORCING STEEL

5. STRUCTURAL WELDING

A. PERIODIC VISUAL INSPECTION

☐ SINGLE PASS FILLET WELDS

$\frac{1}{16}$ " OR SMALLER

☐ STAIRS AND RAILING SYSTEM

☐ STEEL DECK

☐ WELDED STUDS

☐ COLD FORMED STUDS AND JOISTS

☐ REINFORCING STEEL

B. CONTINUOUS VISUAL INSPECTION AND NDT (SECTION 1704)

☐ ALL OTHER WELDING (NDT EXCEPTION: FILLET WELD)

☐ REINFORCING STEEL; AND NOT REQUIRED

☐ MOMENT - RESISTING FRAMES

☐ OTHERS: _____

6. ☐ HIGH STRENGTH BOLTING

7. ☐ STRUCTURAL MASONRY

8. ☐ PILING, DRILLED PIERS AND CAISSON

9. ☐ SHOTCRETE

10. ☒ SPECIAL GRADING, EXCAVATION AND FILLING (GEO ENGINEERED)

11. BOLTS INSTALLED IN EXISTING CONCRETE OR MASONRY:

☒ CONCRETE

☐ MASONRY

☐ PULL / TORQUE TESTS PER CBC SEC. 1607C & 1615C

12. ☐ SHEAR WALLS AND FLOOR SYSTEMS USED AS SHEAR DIAPHRAGMS

13. ☐ HOLD DOWNS

14. STRUCTURAL OBSERVATION PER SEC. 1704 (2016 CBC) FOR THE FOLLOWING:

☒ FOUNDATIONS

☐ STEEL FRAMING

☒ CONCRETE CONSTRUCTION

☐ MASONRY CONSTRUCTION

☐ WOOD FRAMING

☐ OTHERS: _____
- ABBREVIATIONS:
- | | | | |
|-------------|----------------------------|--------------|----------------------------|
| A.B. | ANCHOR BOLT | LLH | LONG LEG HORIZONTAL |
| ABV. | ABOVE | LLV. | LONG LEG VERTICAL |
| ADD'TL | ADDITIONAL | LONG. | LONGITUDINAL |
| ALT. | ALTERNATE | MAX. | MAXIMUM |
| ARCH. | ARCHITECT | MECH. | MECHANICAL |
| BLDG. | BUILDING | MFR. | MANUFACTURER |
| BLW. | BELOW | MIN. | MINIMUM |
| BM. | BEAM | MISC. | MISCELLANEOUS |
| B.N. | BOUNDARY NAIL | (N) | NEW |
| BOT. | BOTTOM | N.I.A. | NOT IN CONTRACT |
| C.I.P. | CAST-IN-PLATE | NOM. | NOMINAL |
| C.J.P. | COMPLETE JOINT PENETRATION | NO. | NUMBER |
| C.J. | CONTROL JOINT | N.T.S. | NOT TO SCALE |
| ¢ | CENTER LINE | O.C. | ON CENTER |
| CL.R. | CLEAR | O.H. | OPPOSITE HAND |
| CMU | CONCRETE MASONRY UNIT | OPNG. | OPENING |
| COL. | COLUMN | ORIG. | ORIGINAL |
| CONC. | CONCRETE | O.W.J. | OPEN WEB JOIST |
| CONST. | CONSTRUCTION | PART. | PARTITION |
| CONT. | CONTINUOUS | PERIM. | PERIMETER |
| DBL. | DOUBLE | PERP. | PERPENDICULAR |
| DET. | DETAIL | R | PLATE, PROPERTY LINE |
| DIA., Ø | DIAMETER | P.J.P. | PARTIAL JOINT PENETRATION |
| DIAG. | DIAGONAL | P.L.Y., PWD. | PLYWOOD |
| DL | DEAD LOAD | PSF | POUNDS PER SQUARE FOOT |
| DWG. | DRAWINGS | PSI | POUNDS PER SQUARE INCH |
| EA. | EACH | R, RAD. | RADIUS |
| EL. | ELEVATION | REF. | REFERENCE |
| EMBED. | EMBEDMENT | RET. | RETURN |
| E.N. | EDGE NAIL | REINF. | REINFORCING |
| EQ. | EQUAL | REQ'D | REQUIRED |
| EXIST., (E) | EXISTING | S.A.D. | SEE ARCHITECTURAL DRAWINGS |
| EXT. | EXTERIOR | SCHED. | SCHEDULE |
| FDN. | FOUNDATION | S.L.D. | SEE LANDSCAPE DRAWINGS |
| FIN. | FINISH | SECT. | SECTION |
| FL. | FLOOR | SIM. | SIMILAR |
| F.N. | FIELD NAIL | S.N. | SHEAR NAIL |
| FP | FULL PENETRATION | S.O.G. | SLAB ON GRADE |
| FT. | FOOT | SPEC. | SPECIFICATION |
| FTG. | FOOTING | SQ. | SQUARE |
| GA. | GUAGE | STRUCT. | STRUCTURAL |
| GALV. | GALVANIZED | SW. | SHEAR WALL |
| GL. | GRIDLINE | SYM. | SYMMETRICAL |
| GLB | GLU-LAM BEAM | T&B | TOP & BOTTOM |
| H.S.B. | HIGH-STRENGTH BOLT | T&G | TONGUE & GROOVE |
| HD | HOLDOWN | T.J. | TRUSS JOIST |
| HORIZ. | HORIZONTAL | TYP. | TYPICAL |
| IN. | INCH | U.N.O. | UNLESS NOTED OTHERWISE |
| LB. | POUND | VERT. | VERTICAL |
| LGS | LIGHT GUAGE STEEL | W/ | WITH |
| LL | LIVE LOAD | W.F. | WIDE FLANGE |
| | | W.P. | WORKING POINT |
- DESCRIPTION OF WORK:
1. THIS EXISTING PARK IS LOCATED ON A STEEPLY SLOPING SITE AND IS DIVIDED INTO FOUR MAIN QUADRANTS. THE PARK RENOVATION PROJECT INCLUDES THE DESIGN OF THE FOLLOWING: A NEW CONCRETE TENNIS COURT SLAB (SOUTHWEST QUADRANT), REPLACEMENT RETAINING WALLS NORTH AND SOUTH OF THE COURT, NEW TERRACE WALLS (NORTHWEST QUADRANT), REPLACEMENT OF THE MAIN STAIRS AND STAIR RETAINING WALLS (CENTRALLY LOCATED) AND REPLACEMENT STAIRS AND PARTIAL REPLACEMENT STAIR RETAINING WALL CONNECTING THE MAIN STAIR LANDING TO THE BASKETBALL COURT (SOUTHEAST QUADRANT).
- PROJECT DIRECTORY:
- Owner:
DEPARTMENT OF PUBLIC WORKS
CITY OF SAUSALITO
420 LITHO STREET
SAUSALITO, CA 94965-1933
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|--------------|------------|
| Issue: | Date: |
| Coordination | 03.30.2018 |
| 75% Set | 04.03.2018 |
| 100% Set | 06.05.2018 |
- Scale: AS NOTED
- Job No. 17-056
- General Notes I
- S-000
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VIII. CONCRETE REINFORCING STEEL:

1. REINFORCING BARS SHALL BE DEFORMED BARS CONFORMING TO ASTM A615 GRADE 60 FOR ALL BAR SIZES AND ASTM A706 GRADE 60 FOR ALL WELDED BARS.
2. WELDED WIRE FABRIC SHALL CONFORM TO ASTM A185 IN FLAT SHEETS, AND IN SLABS MAY BE RAISED INTO POSITION DURING THE CONCRETE POURING OPERATION. LAP WIRE FABRIC 12” MINIMUM.
3. ALL CONCRETE REINFORCEMENT SHALL BE DETAILED, FABRICATED, LABELED, SUPPORTED AND SPACED IN FORMS AND SECURED IN PLACE IN ACCORDANCE WITH THE PROCEDURES REQUIREMENTS OUTLINED IN THE LATEST EDITION OF THE "BUILDING CODE REQUIREMENTS FOR AND REINFORCED CONCRETE," ACI 318 AND THE "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES," ACI 315.
4. UNLESS OTHERWISE NOTED, MAINTAIN COVERAGE TO FACE OF BARS AS FOLLOWS:

A. CONCRETE CAST AGAINST EARTH 3”

B. FORMED SURFACES EXPOSED TO EARTH OR WEATHER

NO. 5 AND SMALLER, WIRE MESH 1½”

ALL OTHER BARS 2”

C. JOISTS, SUSPENDED SLABS, INTERIOR WALL SURFACES

NO. 11 AND SMALLER ¾”

NO. 14 AND LARGER 1½”

D. COLUMNS, BEAMS 1½”
5. REINFORCING SHALL BE CONTINUOUS WITH SPLICES ONLY WHERE SHOWN.
6. FOR MINIMUM LAP LENGTH, SEE SCHEDULE UNLESS OTHERWISE NOTED. SPLICES TO BE STAGGERED SO THAT HALF OR LESS OF BARS ARE LAPPED AT ONE POINT.
7. BAR SUPPORTS IN CONTACT WITH EXPOSED SURFACES SHALL BE PLASTIC TIPPED.
8. BEAM AND SLAB REINFORCING SHALL NOT BE SLEEVED OR OTHERWISE INTERRUPTED EXCEPT AS SHOWN ON THE STRUCTURAL DRAWINGS. ALL WALLS AND SLABS SHALL BE DOWELED INTO FOOTINGS, WALLS, BEAMS, GIRDERS, COLUMNS OR SLABS WITH BARS OF THE SAME SIZE AND SPACING, UNLESS NOTED OTHERWISE.
9. ADDITIONAL BARS SHALL BE PROVIDED AROUND ALL FLOOR AND WALL OPENINGS, AS SHOWN ON DETAILS.
10. CHECKED SHOP DRAWINGS SHOWING REINFORCING DETAILS, INCLUDING BAR SIZES, SPACING AND PLACEMENT SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO FABRICATION.

IX. EPOXY GROUTING:

1. WHERE EPOXY IN CONCRETE IS INDICATED ON PLANS OR DETAILS, USE HILTI HIT–RE 500 V3 (ICC ESR–3814), HILTI HIT–HY 200 (ICC ESR–3187), SIMPSON SET–XP ADHESIVE (ICC ESR–2508), OR DEWALT PURE 110+ ADHESIVE (ICC ESR–3298) FOR USE IN CONCRETE. (CONTRACTOR MAY SUBMIT OTHER EPOXY SYSTEMS FOR APPROVAL, ALONG WITH AN ICC–ES OR IAPMO UES REPORT DEMONSTRATING COMPLIANCE WITH THE 2015 IBC FOR THE SPECIFIC PRODUCT.)
2. WHERE EPOXY IN CMU IS INDICATED ON PLANS OR DETAILS, USE HILTI HIT–HY 70 ADHESIVE (ICC ESR–2682), SIMPSON ET–HP ADHESIVE (IAPMO UES–241) OR DEWALT AC100+ GOLD (ICC ESR–3200) FOR USE IN SOLID GROUTED MASONRY. (CONTRACTOR MAY SUBMIT OTHER EPOXY SYSTEMS FOR APPROVAL, ALONG WITH ICC–ES OR IAPMO UES REPORT DEMONSTRATING COMPLIANCE WITH THE 2015 IBC FOR THE SPECIFIC PRODUCT.)
3. WHERE EPOXY IN URM IS INDICATED ON PLANS OR DETAILS, USE HILTI HIT–HY 70 ADHESIVE ANCHOR SYSTEM (ICC ESR–3342), SIMPSON SET ADHESIVE (ICC ESR–1772) OR DEWALT AC100+ GOLD (ICC ESR–4105) FOR USE IN UNREINFORCED MASONRY. PLASTIC MESH SCREEN TUBES PER ICC ESR–3342, ICC ESR–1772 OR STEEL MESH SCREEN TUBES PER ICC ESR–4105 SHALL BE USED AT ALL ANCHOR LOCATIONS (CONTRACTOR MAY SUBMIT OTHER EPOXY SYSTEMS FOR APPROVAL, ALONG WITH ICC–ES OR IAPMO UES REPORT DEMONSTRATING COMPLIANCE WITH THE 2015 IBC FOR THE SPECIFIC PRODUCT.)
4. DRILL HOLES TO EPOXY MANUFACTURER’S RECOMMENDED SIZE. CLEAN HOLES WITH A CIRCULAR WIRE OR NYLON BRUSH AND BLOW OUT WITH COMPRESSED AIR.
5. SLOWLY INSERT ROD OR BAR WHILE TURNING ONE FULL ROTATION. DO NOT DISTURB DOWEL UNTIL EPOXY HAS SET.
6. INSTALL ADHESIVE ANCHORS THAT ARE TO BE UNDER SUSTAINED TENSION LOADING IN HORIZONTAL TO VERTICAL OVERHEAD ORIENTATION SHALL BE DONE BY A CERTIFIED ADHESIVE ANCHOR INSTALLER (AAI) AS CERTIFIED THROUGH ACI AND IN ACCORDANCE WITH ACI 318–2014 (SECTION 17.8.2.2). PROOF OF CURRENT CERTIFICATION SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCEMENT OF INSTALLATION.

X. TESTING AND INSPECTION:

1. SPECIAL INSPECTIONS SHALL BE PERFORMED BY AN APPROVED INDEPENDENT TESTING AND INSPECTION AGENCY OR AS INDICATED BELOW.
2. THE INSPECTION AGENCY SHALL BE RETAINED BY AND PAID FOR BY THE OWNER.
3. THE CONTRACTOR SHALL SUBMIT TO THE ENGINEER, PRIOR TO BEGINNING CONSTRUCTION, A DETAILED LIST OF "SPECIAL INSPECTION" ITEMS INDICATING THE SCOPE OF TESTING AND INSPECTION AND THE AGENCY OR ENGINEER PERFORMING THE WORK.
4. THE INSPECTION AGENCY SHALL PROVIDE INSPECTION REPORTS TO THE ARCHITECT & STRUCTURAL ENGINEER. THE REPORTS SHALL INCLUDE ANY ITEMS WHICH ARE IN NON–COMPLIANCE WITH THE DESIGN DOCUMENTS.
5. THE STRUCTURAL ENGINEER WILL REQUIRE A FINAL REPORT FROM THE INSPECTION AGENCY. THE REPORT NEEDS TO SHOW THAT ALL DEFICIENCIES MENTIONED IN EARLIER REPORTS HAVE BEEN CORRECTED. COPIES OF THE TESTING AND INSPECTION REPORT SHALL BE SENT TO THE BUILDING DEPARTMENT, ARCHITECT, STRUCTURAL ENGINEER AND OWNER.

6. PROVIDE "SPECIAL INSPECTIONS" FOR ALL ITEMS AS REQUIRED BY THE CALIFORNIA BUILDING CODE, 2016 EDITION, SEE SHEET S–1.0 UNDER "SPECIAL INSPECTION AND STRUCTURAL OBSERVATION."
- INSPECTIONS BY INDEPENDENT AGENCY:

A. SPECIAL INSPECTION OF FOUNDATION EXCAVATIONS SHALL BE PERFORMED BY THE GEOTECHNICAL ENGINEER.

B. CONCRETE PLACEMENT: DURING THE TAKING OF TEST SPECIMENS AND PLACING OF REINFORCED CONCRETE, EXCEPT CONCRETE WHERE THE SPECIFIED STRENGTH IS 2,500 PSI OR LESS. FOUR TEST CYLINDERS FROM EACH 150 CUBIC YARDS OR FRACTION THEREOF POURED IN ANY ONE DAY SHALL BE SECURED AND REPORTED BY AN INDEPENDENT TESTING AGENCY; ONE TO BE TESTED AT 7 DAYS, TWO AT 28 DAYS, AND THE FOURTH HELD IN RESERVE.

C. BOLTS DRILLED AND EPOXIED INTO EXISTING CONCRETE.

- INSPECTIONS BY ENGINEER OF RECORD:

D. FOUNDATION EXCAVATION.

E. CONCRETE REINFORCING STEEL: DURING PLACING OF REINFORCING STEEL. EXCEPTION: THE SPECIAL INSPECTOR NEED NOT BE PRESENT DURING ENTIRE REINFORCING STEEL–PLACING OPERATIONS, PROVIDED HE/SHE HAS INSPECTED FOR CONFORMANCE WITH THE APPROVED PLANS PRIOR TO THE CLOSING OF FORMS OR THE DELIVERY OF CONCRETE TO JOBSITE.

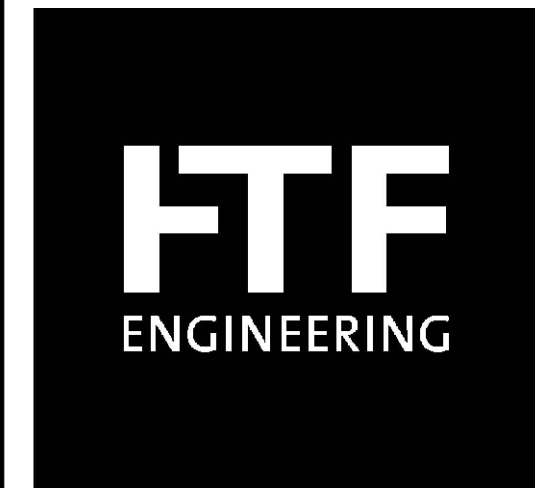
XI. STRUCTURAL OBSERVATIONS:

1. THE STRUCTURAL ENGINEER WILL REPORT ANY OBSERVED DEFICIENCIES TO THE OWNER, CONTRACTOR OR BUILDING OFFICIAL FOLLOWING SITE VISITS. THE STRUCTURAL ENGINEER WILL PROVIDE A WRITTEN REPORT TO THE ARCHITECT AFTER EACH SITE VISIT. HOWEVER, THE STRUCTURAL ENGINEERS SITE VISITS ARE NOT CONSIDERED AS INSPECTION VISITS. THE INSPECTION AGENCY RETAINED AND PAID FOR BY THE OWNER SHALL PROVIDE INSPECTION REPORTS TO THE ARCHITECT/STRUCTURAL ENGINEER. THE REPORTS SHALL INCLUDE ANY ITEMS WHICH ARE IN NON–COMPLIANCE WITH THE DESIGN DOCUMENTS.
2. AFTER THE STRUCTURAL ENGINEER RECEIVES THE FINAL REPORT, FROM THE SPECIAL INSPECTION AGENCY, THE STRUCTURAL ENGINEER WILL SUBMIT A FINAL SUMMARY REPORT DOCUMENTING SITE VISITS AND OBSERVATIONS, NOTING ANY DEFICIENCIES THAT CORRECTIVE WORK HAS BEEN COMPLETED, AND THAT CONSTRUCTION PROCEEDED IN ACCORDANCE WITH THE APPROVED PLANS, SPECIFICATIONS AND APPLICABLE CODES AND REGULATIONS PER SECTION 1704 OF THE CALIFORNIA BUILDING CODE.
3. STRUCTURAL OBSERVATION BY THE DESIGN ENGINEER IS REQUIRED AT THE FOLLOWING PHASES, AND PRIOR TO COVERING WITH OTHER WORK:

A. BEFORE CLOSING OF FORMS – FOUNDATION REINFORCING AND BOLTS INSTALLED IN CONCRETE.
4. FOR A COMPLETE LIST OF REQUIRED "STRUCTURAL OBSERVATION" SEE SHEET S000 UNDER "SPECIAL INSPECTION AND STRUCTURAL OBSERVATION."

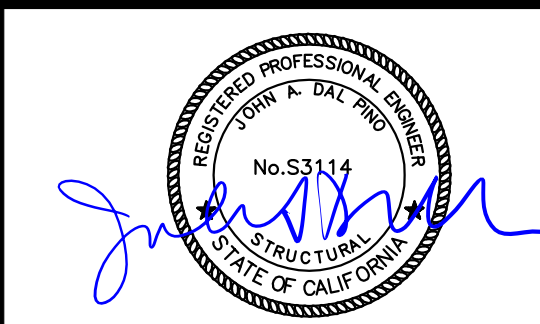
XII. EPOXY GROUTING:

1. WHERE EPOXY IN CONCRETE IS INDICATED ON PLANS OR DETAILS, USE HILTI HIT–RE 500 V3 (ICC ESR–3814), HILTI HIT–HY 200 (ICC ESR–3187), SIMPSON SET–XP ADHESIVE (ICC ESR–2508), OR DEWALT PURE 110+ ADHESIVE (ICC ESR–3298) FOR USE IN CONCRETE. (CONTRACTOR MAY SUBMIT OTHER EPOXY SYSTEMS FOR APPROVAL, ALONG WITH AN ICC–ES OR IAPMO UES REPORT DEMONSTRATING COMPLIANCE WITH THE 2015 IBC FOR THE SPECIFIC PRODUCT.)
2. WHERE EPOXY IN CMU IS INDICATED ON PLANS OR DETAILS, USE HILTI HIT–HY 70 ADHESIVE (ICC ESR–2682), SIMPSON ET–HP ADHESIVE (IAPMO UES–241) OR DEWALT AC100+ GOLD (ICC ESR–3200) FOR USE IN SOLID GROUTED MASONRY. (CONTRACTOR MAY SUBMIT OTHER EPOXY SYSTEMS FOR APPROVAL, ALONG WITH ICC–ES OR IAPMO UES REPORT DEMONSTRATING COMPLIANCE WITH THE 2015 IBC FOR THE SPECIFIC PRODUCT.)
3. WHERE EPOXY IN URM IS INDICATED ON PLANS OR DETAILS, USE HILTI HIT–HY 70 ADHESIVE ANCHOR SYSTEM (ICC ESR–3342), SIMPSON SET ADHESIVE (ICC ESR–1772) OR DEWALT AC100+ GOLD (ICC ESR–4105) FOR USE IN UNREINFORCED MASONRY. PLASTIC MESH SCREEN TUBES PER ICC ESR–3342, ICC ESR–1772 OR STEEL MESH SCREEN TUBES PER ICC ESR–4105 SHALL BE USED AT ALL ANCHOR LOCATIONS (CONTRACTOR MAY SUBMIT OTHER EPOXY SYSTEMS FOR APPROVAL, ALONG WITH ICC–ES OR IAPMO UES REPORT DEMONSTRATING COMPLIANCE WITH THE 2015 IBC FOR THE SPECIFIC PRODUCT.)
4. DRILL HOLES TO EPOXY MANUFACTURER’S RECOMMENDED SIZE. CLEAN HOLES WITH A CIRCULAR WIRE OR NYLON BRUSH AND BLOW OUT WITH COMPRESSED AIR.
5. SLOWLY INSERT ROD OR BAR WHILE TURNING ONE FULL ROTATION. DO NOT DISTURB DOWEL UNTIL EPOXY HAS SET.
6. INSTALL ADHESIVE ANCHORS THAT ARE TO BE UNDER SUSTAINED TENSION LOADING IN HORIZONTAL TO VERTICAL OVERHEAD ORIENTATION SHALL BE DONE BY A CERTIFIED ADHESIVE ANCHOR INSTALLER (AAI) AS CERTIFIED THROUGH ACI AND IN ACCORDANCE WITH ACI 318–2014 (SECTION 17.8.2.2). PROOF OF CURRENT CERTIFICATION SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCEMENT OF INSTALLATION.
7. PER ACI 318–2014 (SECTION 17.1.2) ADHESIVE ANCHORS SHALL BE INSTALLED IN CONCRETE HAVING A MINIMUM AGE OF 21 DAYS AT THE TIME OF ANCHOR INSTALLATION. FOR INSTALLATIONS SOONER THAN 21 DAYS CONSULT ADHESIVE MANUFACTURER.



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Issue:	Date:
Coordination	03.30.2018
75% Set	04.03.2018
100% Set	06.05.2018

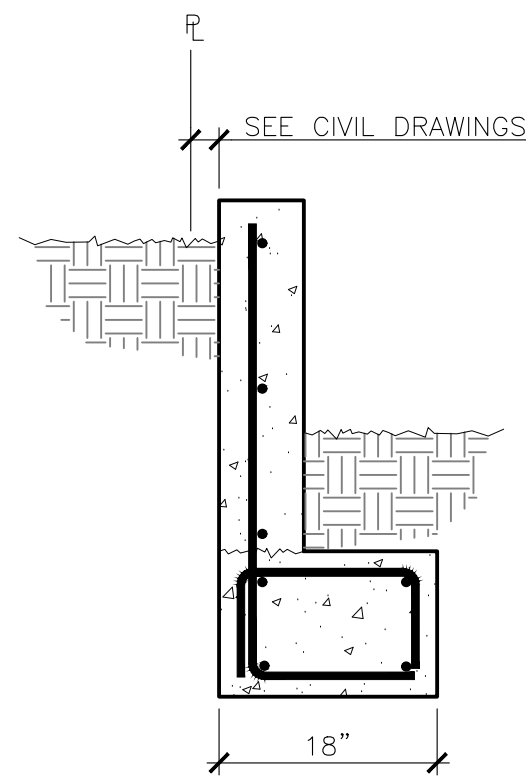
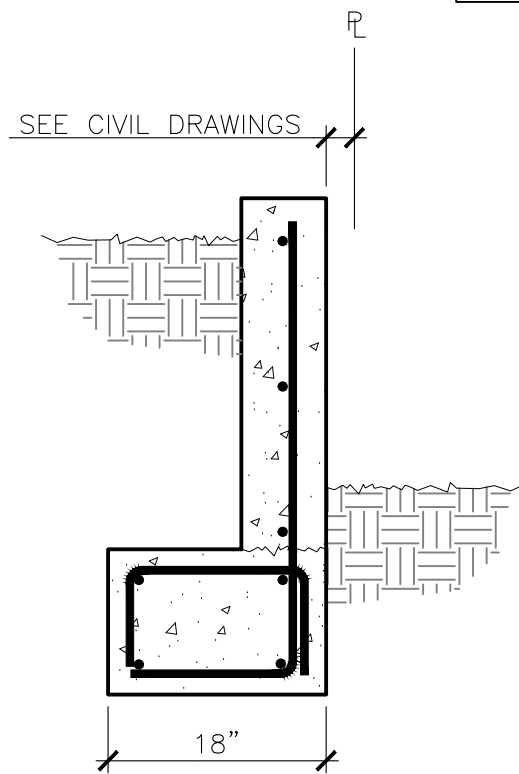
Scale: AS NOTED
Job No. 17-056

General Notes II

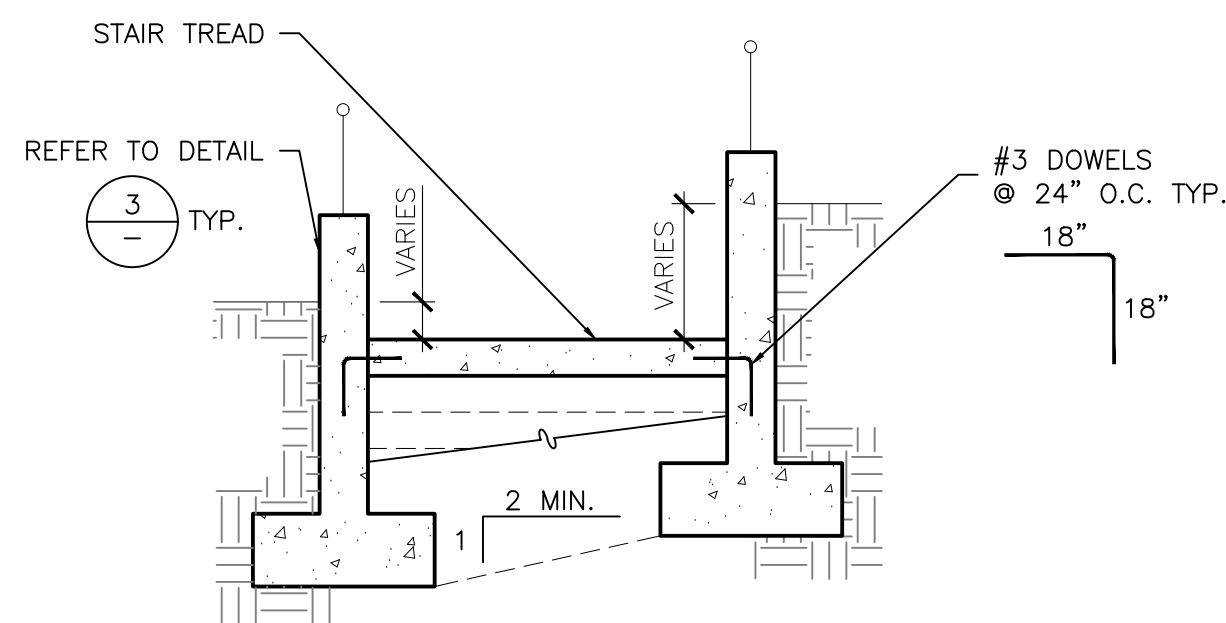
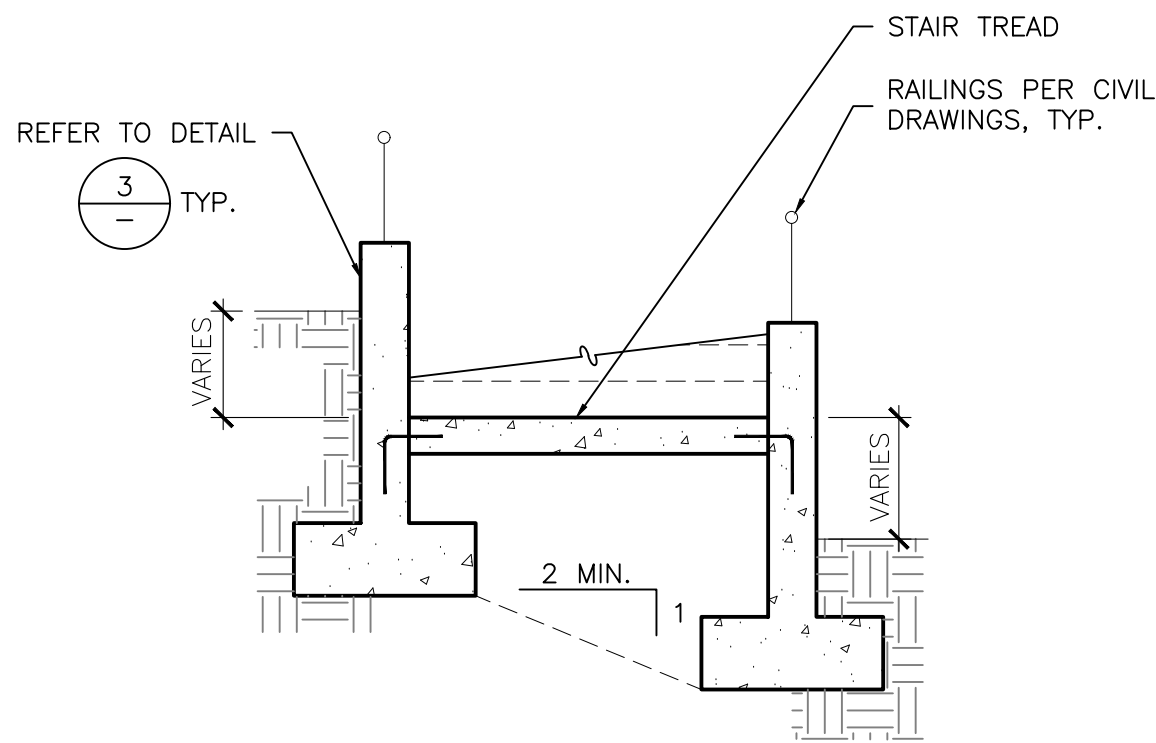
S-001

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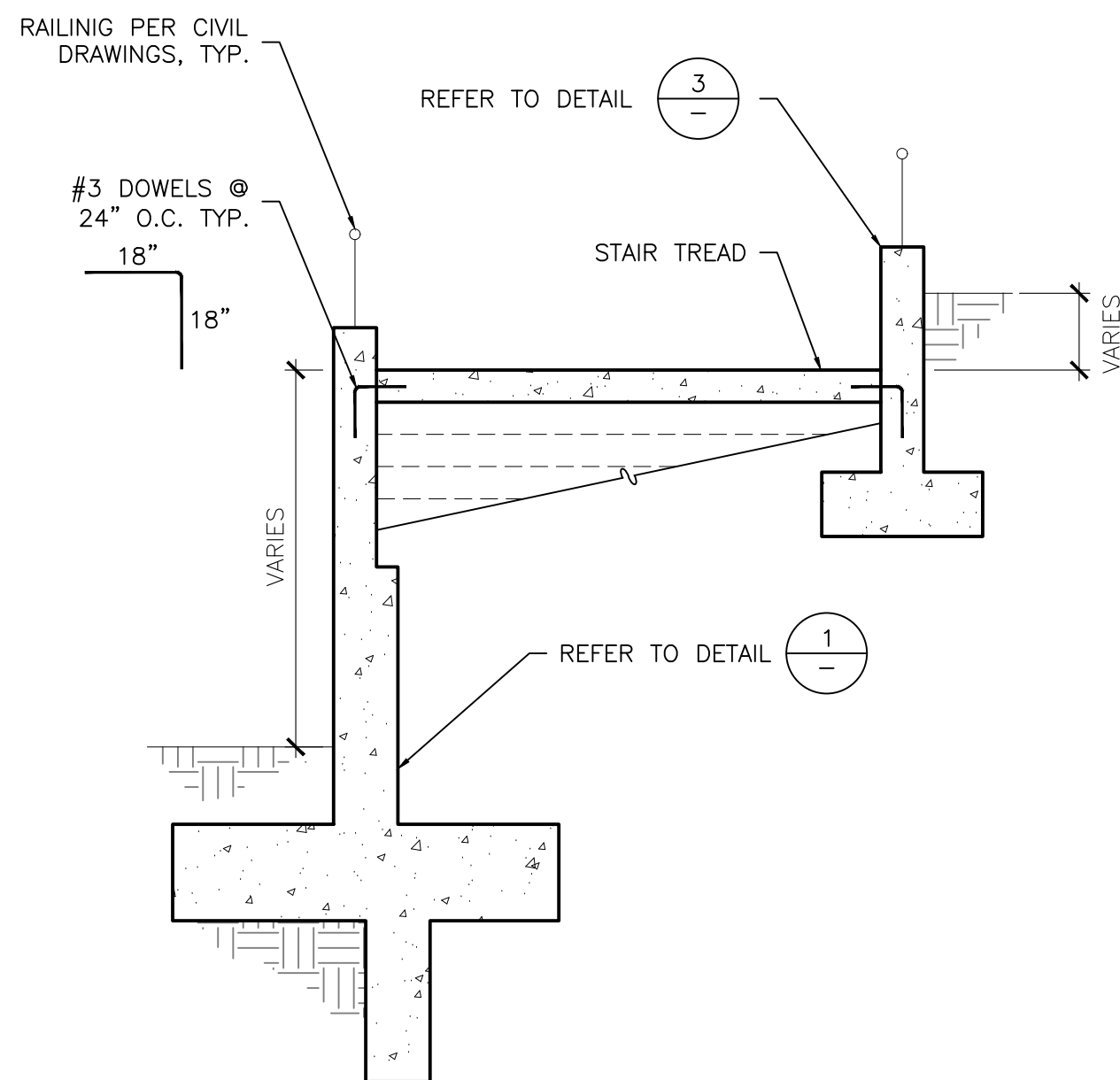
NOTE:
1. FOR INFO NOT SHOWN,
REFER TO 3/-



11 RETAINING WALL ALONG PROPERTY LINE
SCALE: N.T.S. (SCHEMATIC ONLY)



7 SHORT STAIR WALLS (SCHEMATIC ONLY)
SCALE: N.T.S. (SCHEMATIC ONLY)

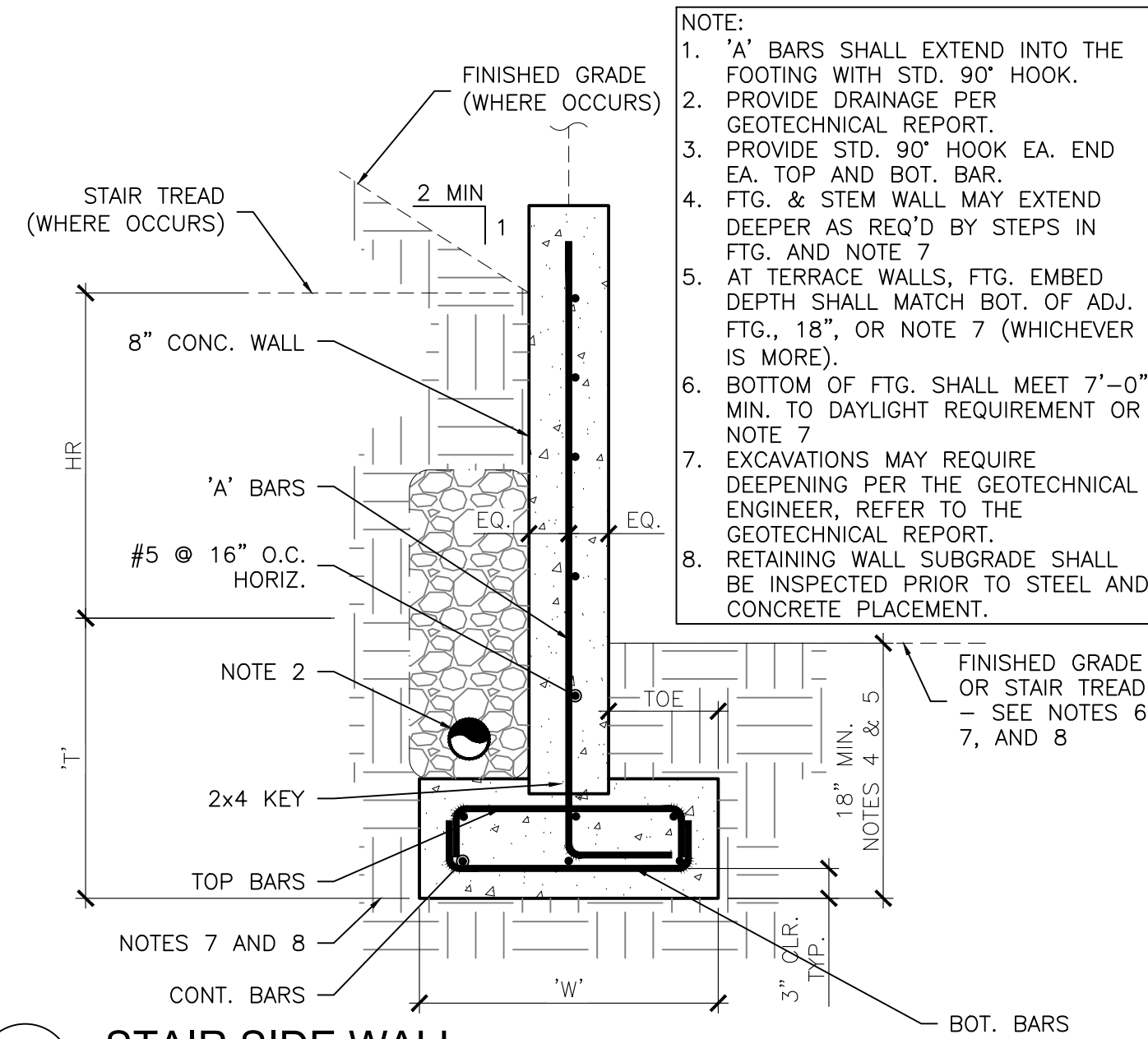


9 STAIR WALLS (SCHEMATIC ONLY)
SCALE: N.T.S. (SCHEMATIC ONLY)

5 NOT USED
SCALE: N.T.S.

FOOTING REINFORCING						
HR	'A' BARS	"W"	TOE	"I"	BOT. BARS	TOP BARS
HR≤2'-6"	#5 @ 16" O.C.	2'-0"	8"	12"	#5 @ 16" O.C.	-

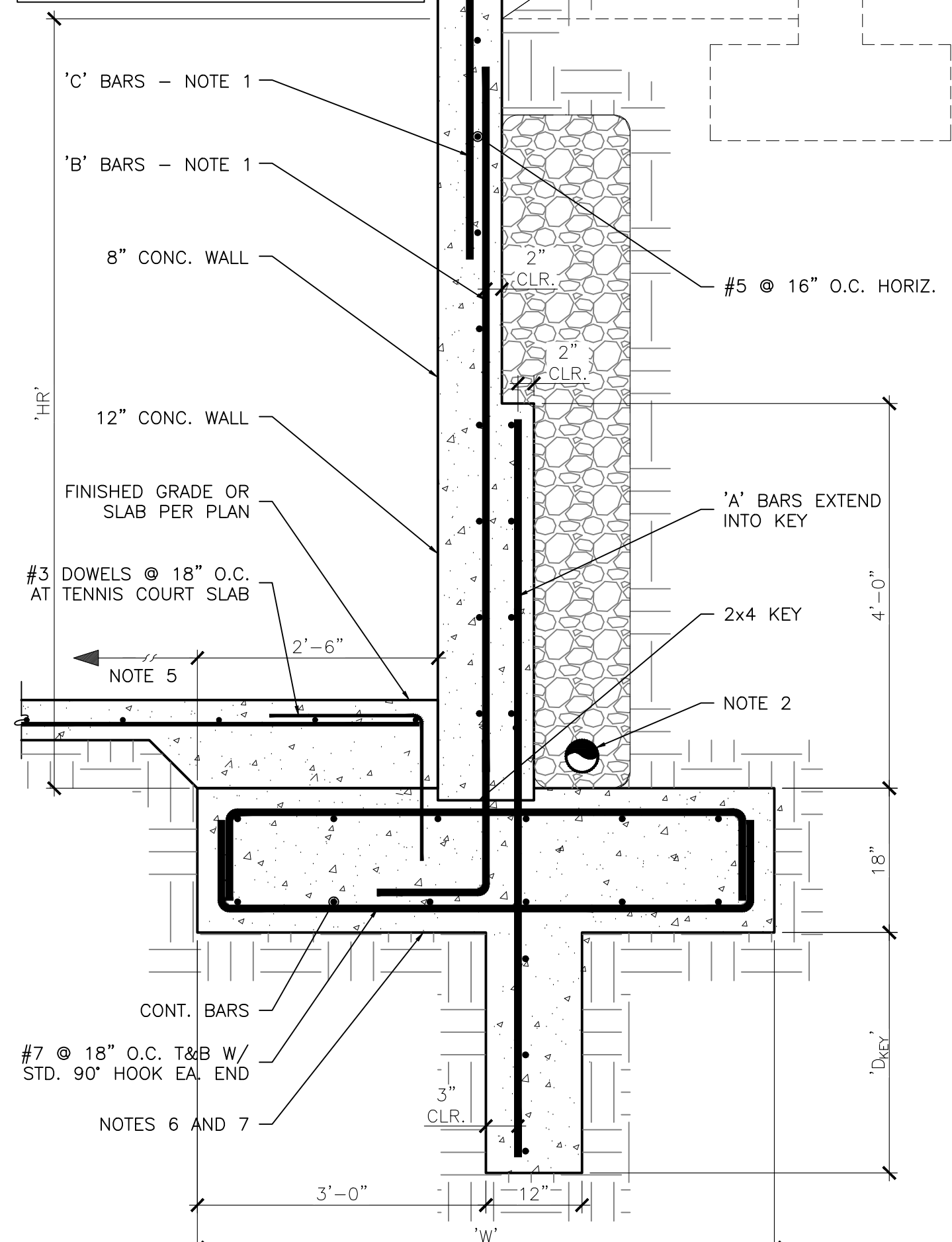
NOTE:
1. 'A' BARS SHALL EXTEND INTO THE FOOTING WITH STD. 90° HOOK.
2. PROVIDE DRAINAGE PER GEOTECHNICAL REPORT.
3. PROVIDE STD. 90° HOOK EA. END EA. TOP AND BOT. BAR.
4. FTG. & STEM WALL MAY EXTEND DEEPER AS REQ'D BY STEPS IN FTG. AND NOTE 7
5. AT TERRACE WALLS, FTG. EMBED DEPTH SHALL MATCH BOT. OF ADJ. FTG., 18" OR NOTE 7 (WHICHEVER IS MORE).
6. BOTTOM OF FTG. SHALL MEET 7'-0" MIN. TO DAYLIGHT REQUIREMENT OR NOTE 7
7. EXCAVATIONS MAY REQUIRE DEEPENING PER THE GEOTECHNICAL ENGINEER, REFER TO THE GEOTECHNICAL REPORT.
8. RETAINING WALL SUBGRADE SHALL BE INSPECTED PRIOR TO STEEL AND CONCRETE PLACEMENT.



3 STAIR SIDE WALL
SCALE: 3/4" = 1'-0"

HR	'A' BARS	'B' BARS	'C' BARS	"W"	'D _{KEY} '	CONT. BARS (T&B)
4'-1"≤HR≤8'-0"	#7 @ 12" O.C.	-	#5 @ 12" O.C.	6'-0"	2'-6"	5-#5
8'-1"≤HR≤10'-6"	#7 @ 6" O.C.	#7 @ 12" O.C.	#5 @ 12" O.C.	7'-0"	3'-6"	6-#5

NOTE:
1. LAP BARS PER LAP SPLICE SCHEDULE. (USE LARGER DIAM. BAR)
2. PROVIDE DRAINAGE PER GEOTECHNICAL REPORT.
3. BACK SLOPE SHALL BE 1.5 MIN.
4. FOR RETAINING OF 4'-0" OR LESS REFER TO 5/-
5. BOTTOM OF FTG. SHALL MEET 7'-0" MINIMUM TO DAYLIGHT REQUIREMENT
6. EXCAVATIONS MAY REQUIRE DEEPENING PER THE GEOTECHNICAL ENGINEER, REFER TO THE GEOTECHNICAL REPORT.
7. RETAINING WALL SUBGRADE SHALL BE INSPECTED PRIOR TO STEEL AND CONCRETE PLACEMENT



1 RETAINING WALLS
SCALE: 3/4" = 1'-0"

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Issue:	Date:
Coordination	03.30.2018
75% Set	04.03.2018
100% Set	06.05.2018

Scale: AS NOTED

Job No. 17-056

Foundation
Details II

S-311